



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene

201 W. Preston Street • Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Joshua M. Sharfstein, M.D., Secretary

April 26, 2013

Public Health & Emergency Preparedness Bulletin: # 2013:16 Reporting for the week ending 04/20/13 (MMWR Week #16)

CURRENT HOMELAND SECURITY THREAT LEVELS

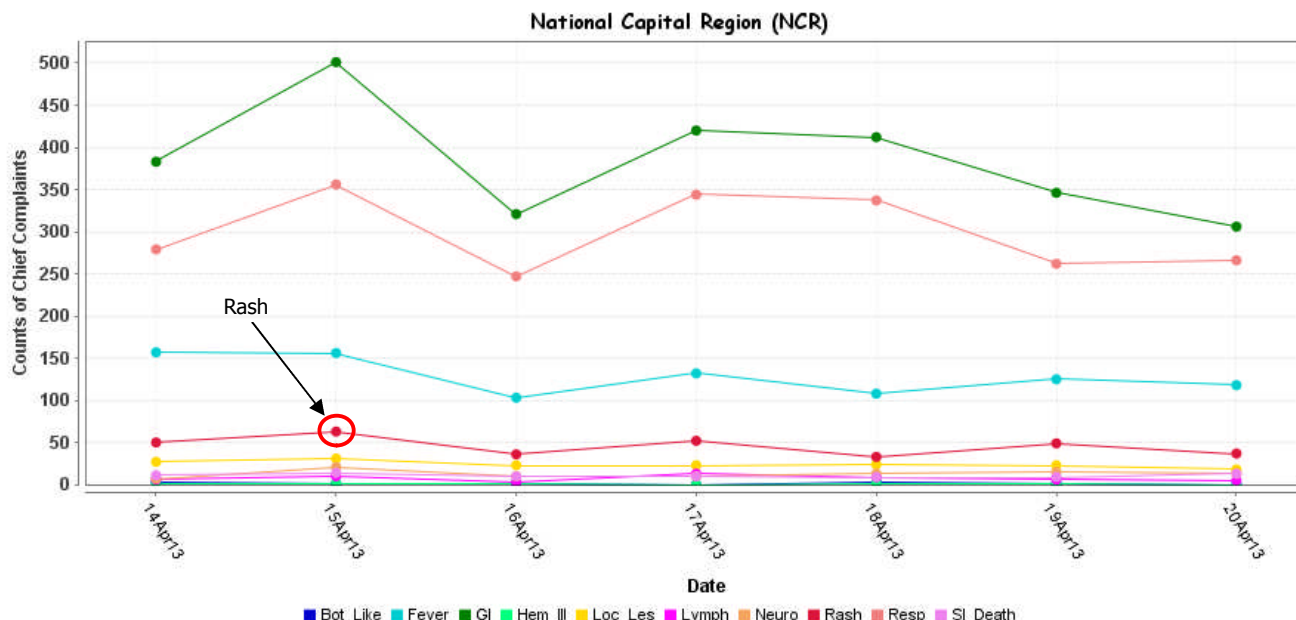
National: No Active Alerts
Maryland: Level One (MEMA status)

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

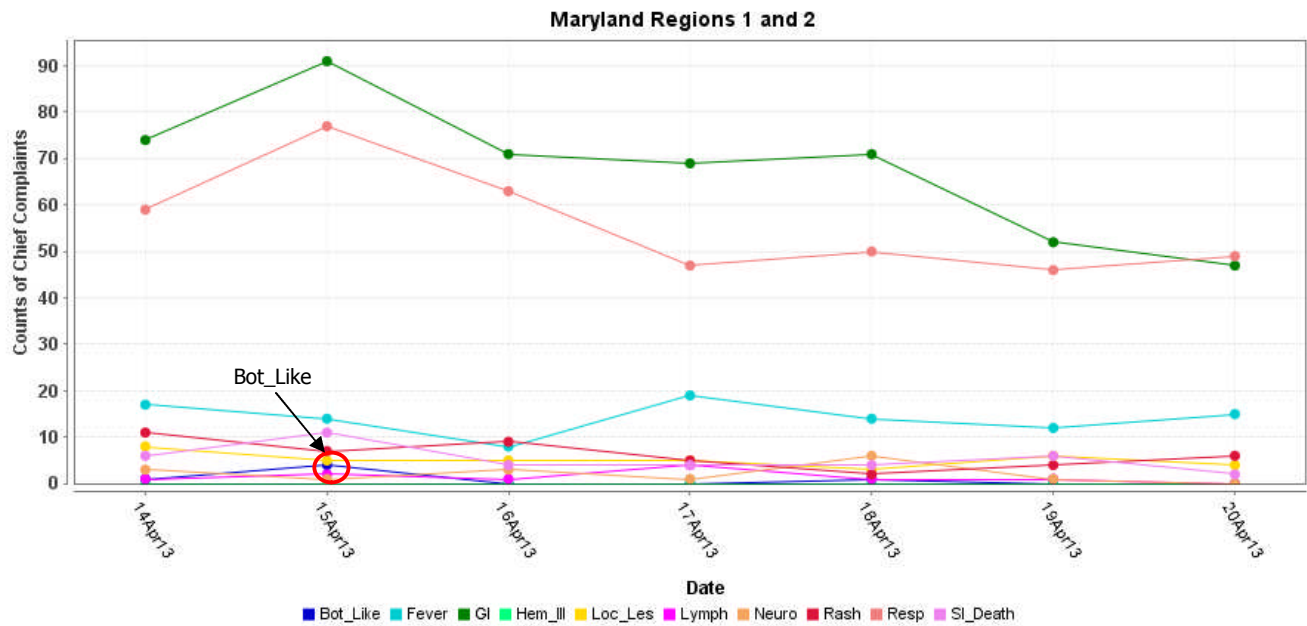
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

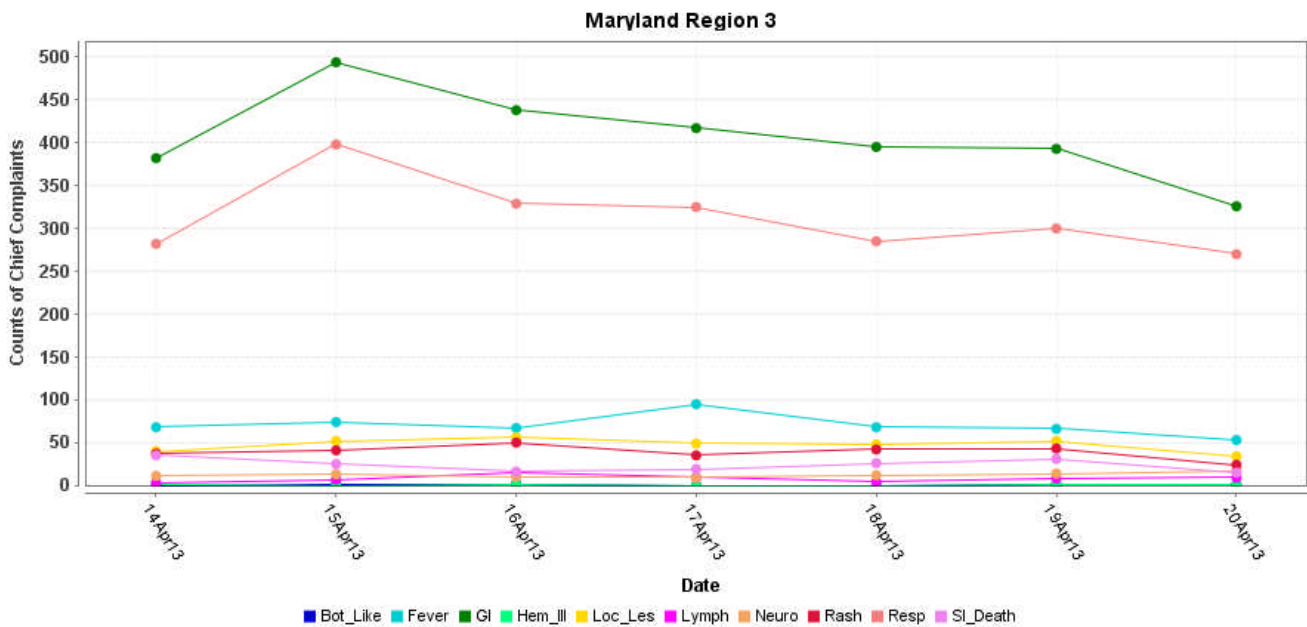


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

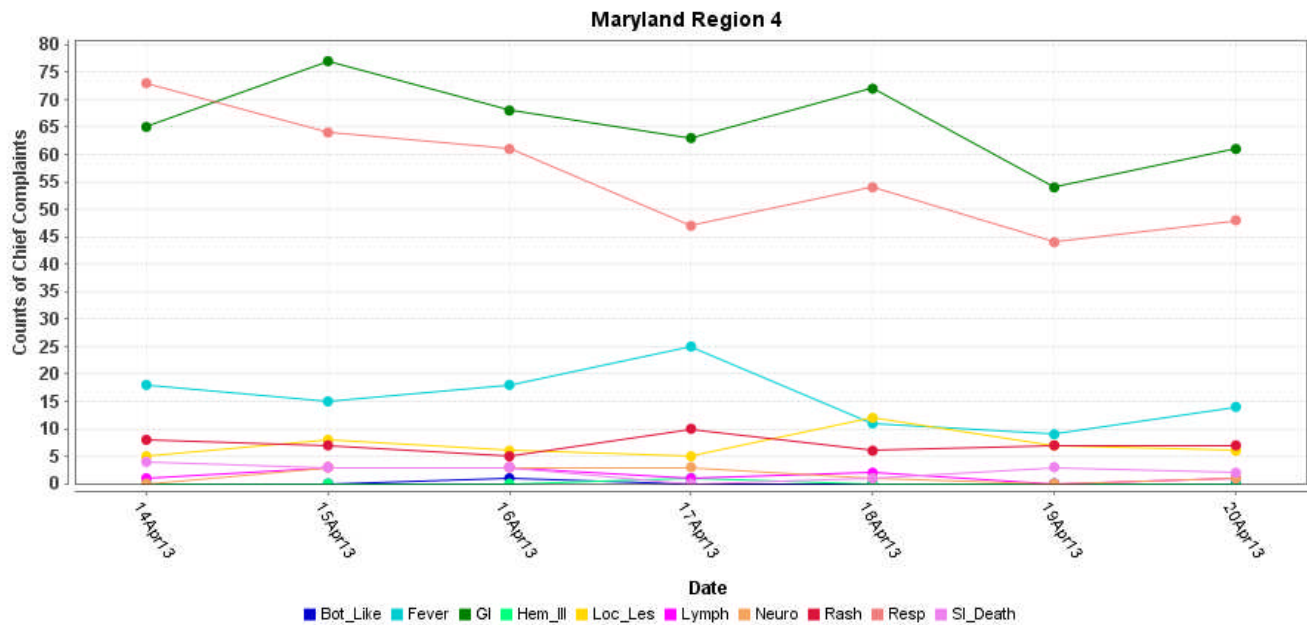
MARYLAND ESSENCE:



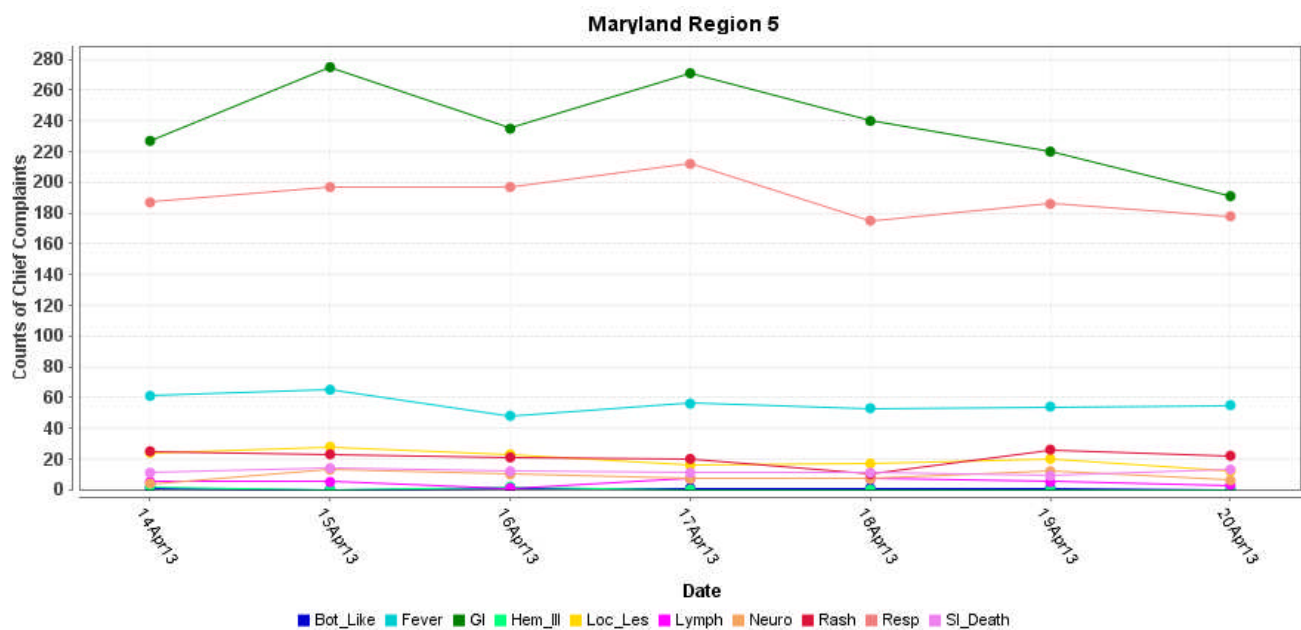
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE

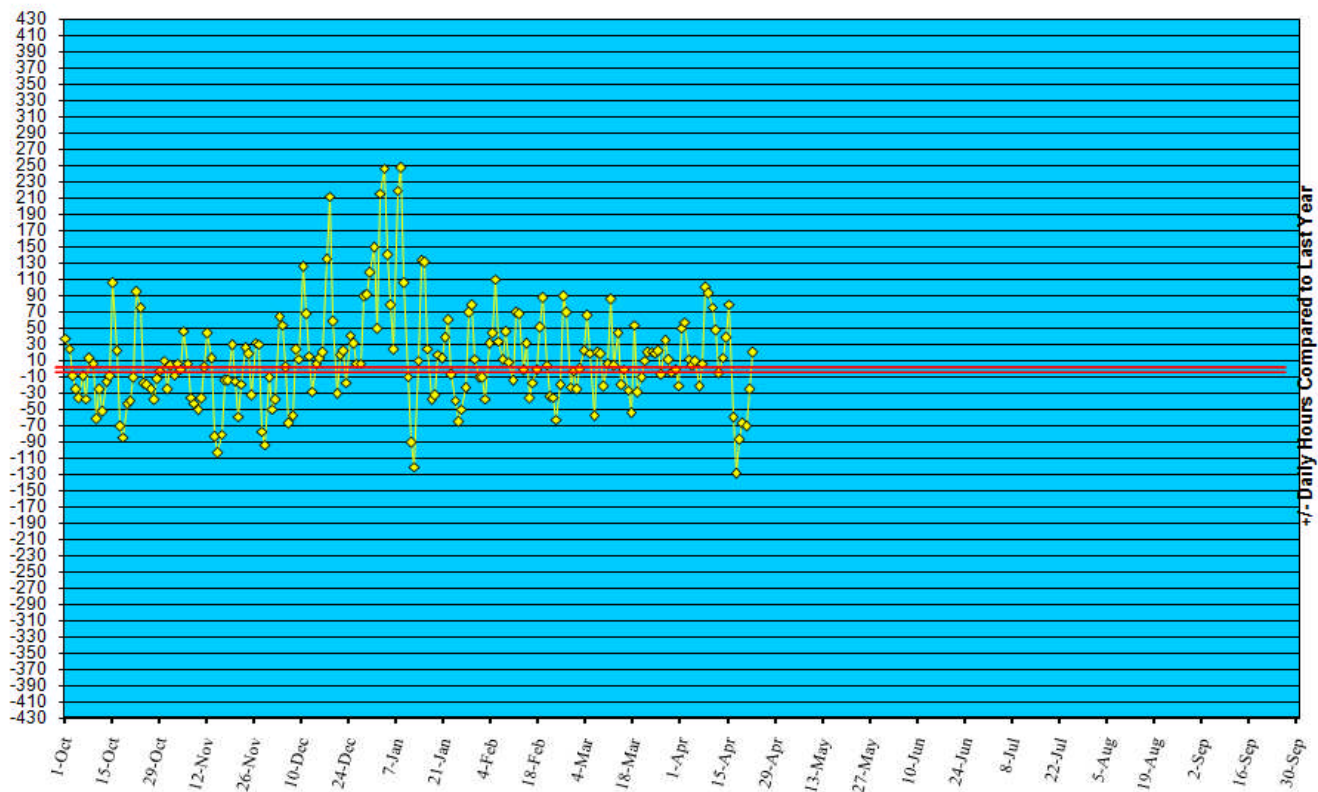


* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/11.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '12 to April 20, '13



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in March 2013 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:

New cases (April 14 – April 20, 2013):

Aseptic

4

Meningococcal

0

Prior week (April 7 – April 13, 2013):

5

0

Week#16, 2012 (April 16 – April 22, 2012):

9

0

2 outbreaks were reported to DHMH during MMWR Week 16 (April 14 - April 20, 2013)

2 Gastroenteritis Outbreaks

1 outbreak of GASTROENTERITIS in a Nursing Home

1 outbreak of GASTROENTERITIS in an Assisted Living Facility

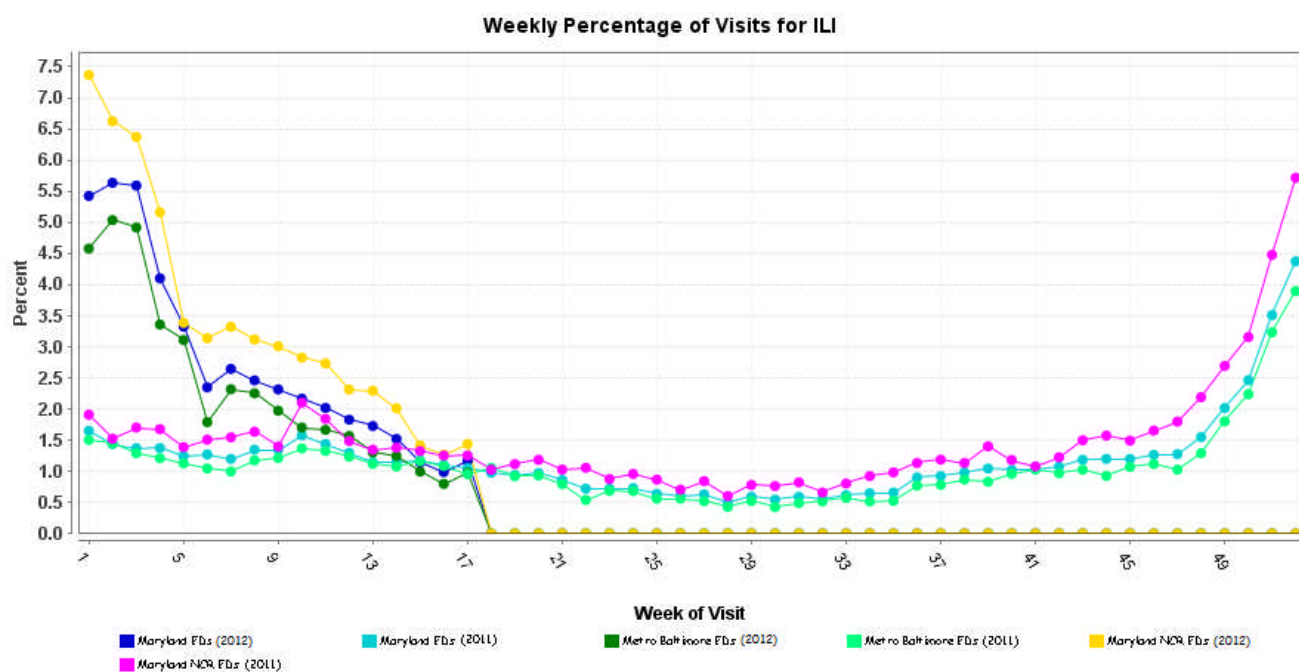
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May. Seasonal influenza activity for Week 16 was: Sporadic Activity with Minimal Intensity.

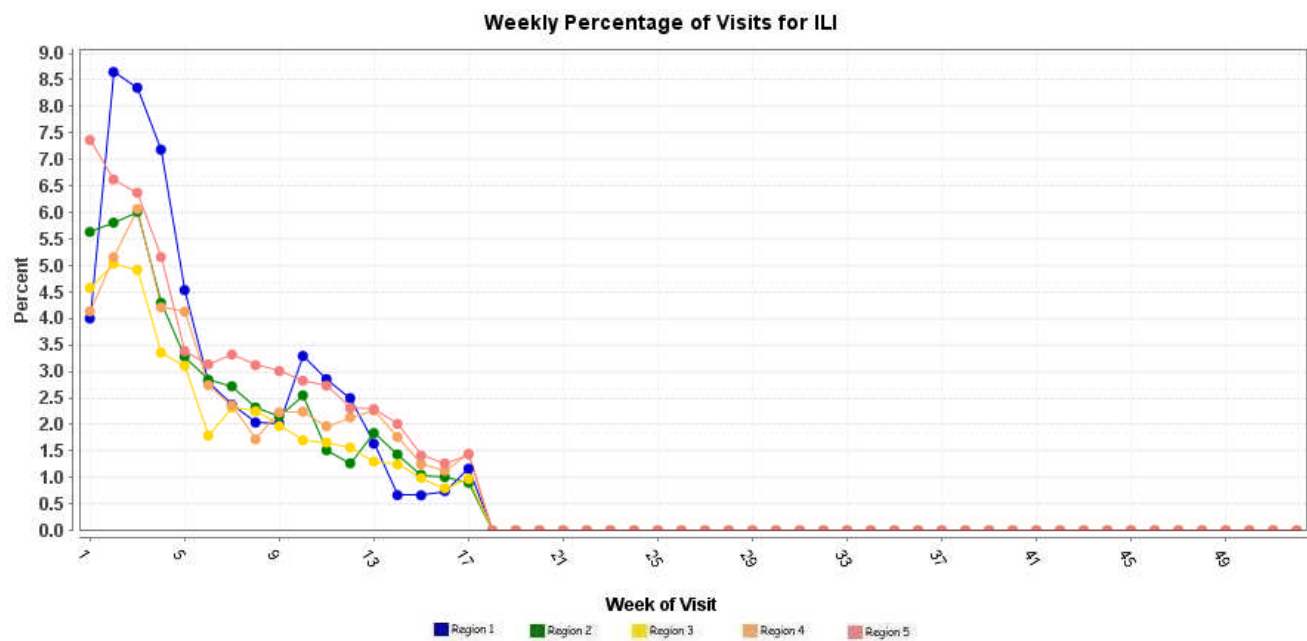
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.

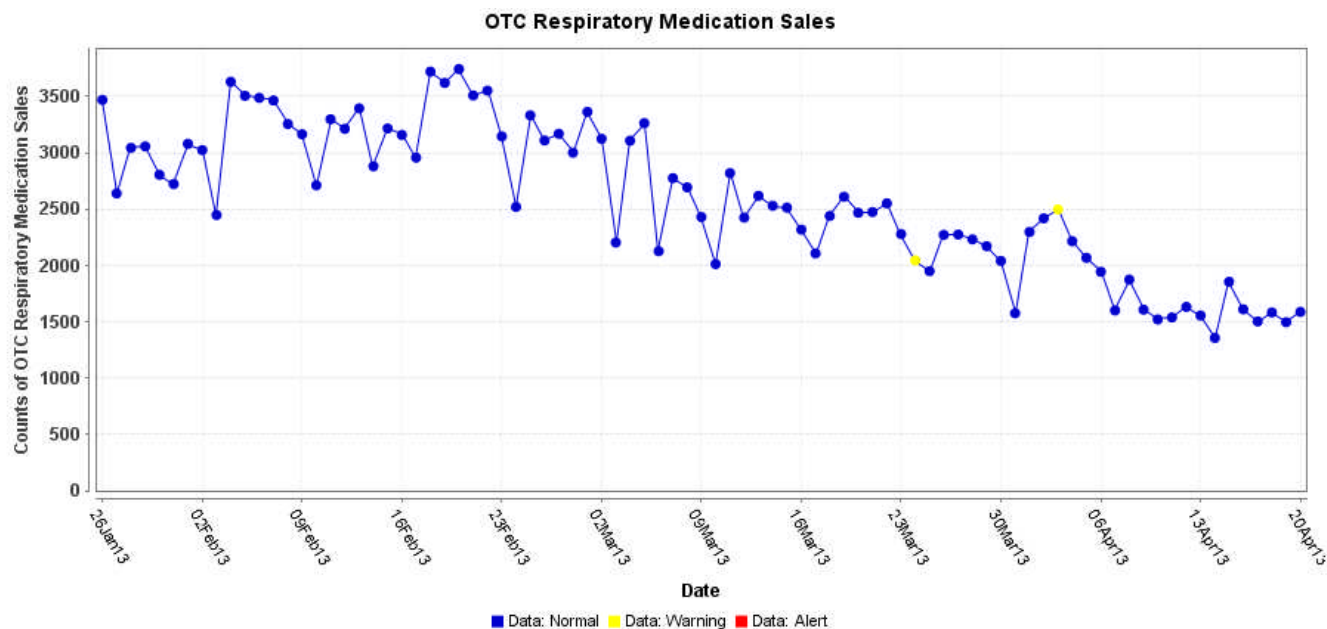


* Includes 2012 and 2013 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic. As of March 12, 2013, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 622, of which 371 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 60%.

AVIAN INFLUENZA (CHINA): 18 April 2013, As China struggles to find the source of the new flu infecting a growing number of its citizens, tests of the usual animal suspects are mostly coming back negative. No pigs and few poultry have so far tested positive for H7N9. International health officials are scratching their heads over the paucity of positive bird tests for a bird flu, especially given that the human case count is more than double the number of positive bird findings. As of Wed [17 Apr 2013], 82 people had been infected and 17 had died. [As of 18 Apr 2013, China has confirmed 87 cases, 17 died, 5 people were healed]. "Something is happening out there that's not being picked up," says Gregory Hartl, spokesperson for the World Health Organization in Geneva. "It argues for the fact that we have to continue to cast the investigation net widely." China's Ministry of Agriculture revealed Wed [17 Apr 2013] that nearly 48 000 tests samples have been taken from live animal markets, farms and slaughter houses across China. Of those, a mere 39 tested positive: 38 in poultry from markets in the eastern Chinese provinces where most of the human cases have been found and one in a wild pigeon, in the eastern Chinese province of Jiangsu. Those findings beg the questions: Where is this bird flu hiding? And is China targeting the right species when it goes looking for H7N9? Infectious diseases expert Michael Osterholm agrees with the suggestion that at this point, investigators need to keep an open mind about where the virus may be coming from. But the director of the Center for Infectious Diseases Research and Policy at the University of Minnesota says too little is known about how China is testing for anyone to be confident that all the negative bird tests were true negatives. He suggests more information is needed before people can feel sure that the results being reported are truly as puzzling as they seem. "There are just a number questions here that we can't answer yet based on the available information," Osterholm said in an interview. "I think the Chinese have been very forthcoming in providing the results. I think the question now is how to interpret these results ... based on how they got the results." Osterholm says the questions that need to be answered are: What types of tests are being performed on samples taken from animals and how well are those tests doing at detecting the new virus? To put this in context, one needs to understand that there was no on-the-shelf test for this H7N9 virus, which is a constellation of bird flu genes that hadn't been seen before. When a new virus is found, specific tests to detect it must be developed and validated so that laboratories can find the virus in all samples where it exists, and not confuse it with other viruses. In the 3 weeks since China realized it was seeing infections with a new flu virus, it has had to develop and roll out tests to find H7N9 in a variety of species and settings. Osterholm says another issue that could affect the test results relates to who is taking samples from animals and how well trained they are. He notes with large outbreaks, authorities sometimes need to draw in people who have few or no skills at grabbing a chicken and swirling a swab around the cloaca, the bird version of an anus. That is where, in poultry, one looks for flu viruses. In people, influenza is a respiratory infection, but in birds, the virus invades the gastric system. "They obviously had to pull people in to do this that likely did not have great experience with this kind of testing," Osterholm says. "We have seen in the past issues where the testing done by inexperienced individuals actually resulted in a substantial reduction in the number of positives versus those individuals who had much more experience." Other factors that need to be considered are how quickly birds move through live animal markets and where they come from. If inspectors come to test after infected birds are sold and leave the market, good tests may still produce negative results. "It wouldn't be an error of the test; it would just be that the sampling didn't detect it," Osterholm says. "The tests could be giving us exactly the right information, but not testing the right birds. And you can still have a substantial under-reporting." The complexity of testing for H7N9 is frustrating for public health officials who are used to flu viruses like H5N1 that make their presence known. That bird flu is no stealth agent. H5N1 has infected at least 622 people in 15 countries since late 2003. In people, it causes mostly devastating illness. In poultry, the result is the same. Whole flocks are wiped out by this highly pathogenic virus. But in poultry, H7N9 is a virus of low pathogenicity, "low path" as flu researchers say. It's not killing birds. It's not even making them sick, so far as anyone can tell. That adds an unexpected layer of complexity to the task of finding out how people are contracting the virus. And until authorities can figure out how people are coming in contact with H7N9, they cannot take effective measures to try to stop the virus from infecting people.

NATIONAL DISEASE REPORTS*

RICIN (WASHINGTON, D.C.): 18 April 2013, The FBI says laboratory tests have confirmed the presence of ricin in letters mailed to a US senator and to President Barack Obama. The FBI said Thursday [18 Apr 2013] that further tests are still being done, but that lab results show the toxin was used in the mailings. There are no known illnesses from the exposure. Paul Kevin Curtis, of Corinth, Mississippi, is suspected of sending the letters to Obama and US Sen. Roger Wicker. He appeared in federal court Thursday [18 Apr 2013] on charges of threatening Obama and others, but he did not enter a plea. His attorney said that the arrest was surprising and that Curtis maintains that he's innocent. (Ricin Toxin is listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

E. COLI (WISCONSIN): 15 April 2013, An investigation is underway in Manitowoc County to determine what may have caused 2 confirmed cases of *E. coli*. Results from a 3rd suspected case are expected later this week. Lab tests confirmed the cases reported in March 2013. The *E. coli* strain has been identified by the Manitowoc County Health Department as O157:H7. Nurse manager Amy Wergin says the people infected don't know each other, but the strain of *E. coli* is the same. "They shop at similar grocery stores, purchase their food at similar places, so it could potentially be linked there," said Wergin. Health department officials say they don't know the exact origin of the *E. coli*, but they do say that it is unlikely it came from places like restaurants. They say if that were the case, there would be a lot more people sick. "We will know as soon as there is a disease, because we are directly in the linkage, either through consumer complaints or because of physicians, or because of actual lab tests," said James Blaha, Manitowoc County Health Department health officer. Health officials would not confirm the location of the *E. coli* Wergin says the investigation continues. "1st, people can figure out where they got it from so they don't get it again. And secondly, if there is some sort of contamination within the food chain, we want to be able to stop it," said Wergin. (Food Safety Threats are Listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS*

YELLOW FEVER (GHANA): 17 April 2013, The Ghana Field Epidemiology and Laboratory Training Program (GFELTP) recently participated in the investigation of a yellow fever outbreak in Jirapa district, located in the northwestern corner of the Upper West Region of Ghana. The outbreak was first reported on 7 Feb 2013 by the District Health Director of Jirapa district, who also happens to be a resident of the GFELTP. The 1st case of jaundice was identified at St Joseph's Hospital in Jirapa district, which was then followed by 10 other cases in a space of 4 weeks from 7 Feb to 4 Mar 2013. An initial investigation of the suspected outbreak was done by the Upper West Regional and Jirapa District Health Management Teams (DHMT). They were later joined by the Disease Surveillance Department and 8 Cohorts V and VI residents of the GFELTP for a follow up investigation from 13 to 17 Mar 2013. Blood samples from all the suspected cases were sent through the Regional Health Directorate to the National Public Health Reference Laboratory (NPHRL) for confirmation. Prior to the receipt of feedback from the NPHRL, 3 of the suspected cases died. The outbreak team together with the DHMT reviewed records of cases of jaundice at St Joseph's Hospital, they sensitized the district and sub district health workers on the need for active surveillance, the team also followed-up on the contacts of probable case, reviewed records of all the other cases at the hospital, they visited the case patient at the regional hospital and assessed yellow fever, measles, meningitis, and acute flaccid paralysis (AFP) activities in the district. The follow up investigation aimed to determine the extent of the suspected outbreak, identify the source and individuals at risk, identify risk factors of the outbreak, determine yellow fever vaccination coverage, evaluate the outbreak investigation, and recommend additional control and preventive measures needed. (Viral Hemorrhagic Fevers are listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

CHOLERA, DIARRHEA AND DYSENTERY (AFRICA, ASIA): 17 April 2013, Following a suspected cholera outbreak in Kigoroby Sub-county, Hoima district, 3 people have been confirmed dead while 16 others are hospitalized. The District Health Inspector, Fred Byenumi, told New Vision on Tuesday evening [16 Apr 2013], that the suspected outbreak has been reported in Kapaapi and Kibiro parishes along Lake Albert shores. "But we are yet to confirm if it is cholera we are taking samples to the national research center in Entebbe to ascertain if it is the one but according to the symptoms it seem to be cholera, once we confirm we shall declare to you," Byenumi explained. He said as part of interventions they have opened a cholera treatment center at Runga landing site in Kigoroby Sub County that will also handle all emerging cases. He said the disease that was first reported in the area on Thu 11 Apr 2013, is suspected to have spread from Nebbi and Arua the neighboring districts due to the usual interaction between the 2 neighboring areas people that trade along Lake Albert shoreline. James Mugenyi Mulindambura, the area district Councilor blamed the spread on poor sanitation standards in the area. He has said the government should have a deliberate program to improve sanitation in the area. "We have sensitized the people about latrine construction and usage since most of them do not have them (latrines) but they seem can't manage to have proper sanitary facilities which are expensive and out of reach for most of these people given the nature of soils," he said. Meanwhile, every year at the onset of the rainy season there are reported cholera outbreaks in the same sub county. In 2012, the deadly disease claimed the lives of 12 people and more than 600 were hospitalized in the same sub county. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

*National and International Disease Reports are retrieved from <http://www.promedmail.org/>.

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmm.maryland.gov/>

Maryland's Resident Influenza Tracking System: <http://dhmm.maryland.gov/flusurvey>

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents

Table: Text-based Syndrome Case Definitions and Associated Category A Conditions

Syndrome	Definition	Category A Condition
Botulism-like	ACUTE condition that may represent exposure to botulinum toxin ACUTE paralytic conditions consistent with botulism: cranial nerve VI (lateral rectus) palsy, ptosis, dilated pupils, decreased gag reflex, media rectus palsy. ACUTE descending motor paralysis (including muscles of respiration) ACUTE symptoms consistent with botulism: diplopia, dry mouth, dysphagia, difficulty focusing to a near point.	Botulism
Hemorrhagic Illness	SPECIFIC diagnosis of any virus that causes viral hemorrhagic fever (VHF): yellow fever, dengue, Rift Valley fever, Crimean-Congo HF, Kyasanur Forest disease, Omsk HF, Hantaan, Junin, Machupo, Lassa, Marburg, Ebola ACUTE condition with multiple organ involvement that may be consistent with exposure to any virus that causes VHF ACUTE blood abnormalities consistent with VHF: leukopenia, neutropenia, thrombocytopenia, decreased clotting factors, albuminuria	VHF
Lymphadenitis	ACUTE regional lymph node swelling and/ or infection (painful bubo- particularly in groin, axilla or neck)	Plague (Bubonic)
Localized Cutaneous Lesion	SPECIFIC diagnosis of localized cutaneous lesion/ ulcer consistent with cutaneous anthrax or tularemia ACUTE localized edema and/ or cutaneous lesion/ vesicle, ulcer, eschar that may be consistent with cutaneous anthrax or tularemia INCLUDES insect bites EXCLUDES any lesion disseminated over the body or generalized rash EXCLUDES diabetic ulcer and ulcer associated with peripheral vascular disease	Anthrax (cutaneous) Tularemia
Gastrointestinal	ACUTE infection of the upper and/ or lower gastrointestinal (GI) tract SPECIFIC diagnosis of acute GI distress such as Salmonella gastroenteritis ACUTE non-specific symptoms of GI distress such as nausea, vomiting, or diarrhea EXCLUDES any chronic conditions such as inflammatory bowel syndrome	Anthrax (gastrointestinal)

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Respiratory	<p>ACUTE infection of the upper and/ or lower respiratory tract (from the oropharynx to the lungs, includes otitis media)</p> <p>SPECIFIC diagnosis of acute respiratory tract infection (RTI) such as pneumonia due to parainfluenza virus</p> <p>ACUTE non-specific diagnosis of RTI such as sinusitis, pharyngitis, laryngitis</p> <p>ACUTE non-specific symptoms of RTI such as cough, stridor, shortness of breath, throat pain</p> <p>EXCLUDES chronic conditions such as chronic bronchitis, asthma without acute exacerbation, chronic sinusitis, allergic conditions (Note: INCLUDE <i>acute exacerbation</i> of chronic illnesses.)</p>	<p>Anthrax (inhalational)</p> <p>Tularemia</p> <p>Plague (pneumonic)</p>
Neurological	<p>ACUTE neurological infection of the central nervous system (CNS)</p> <p>SPECIFIC diagnosis of acute CNS infection such as pneumococcal meningitis, viral encephalitis</p> <p>ACUTE non-specific diagnosis of CNS infection such as meningitis not otherwise specified (NOS), encephalitis NOS, encephalopathy NOS</p> <p>ACUTE non-specific symptoms of CNS infection such as meningismus, delirium</p> <p>EXCLUDES any chronic, hereditary or degenerative conditions of the CNS such as obstructive hydrocephalus, Parkinson's, Alzheimer's</p>	Not applicable
Rash	<p>ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs)</p> <p>SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox</p> <p>ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem</p> <p>EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheic dermatitis, rosacea</p> <p>EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema</p>	Smallpox
Specific Infection	<p>ACUTE infection of known cause not covered in other syndrome groups, usually has more generalized symptoms (i.e., not just respiratory or gastrointestinal)</p> <p>INCLUDES septicemia from known bacteria</p> <p>INCLUDES other febrile illnesses such as scarlet fever</p>	Not applicable

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents (continued from previous page)

Syndrome	Definition	Category A Condition
Fever	<p>ACUTE potentially febrile illness of origin not specified</p> <p>INCLUDES fever and septicemia not otherwise specified</p> <p>INCLUDES unspecified viral illness even though unknown if fever is present</p> <p>EXCLUDE entry in this syndrome category if more specific diagnostic code is present allowing same patient visit to be categorized as respiratory, neurological or gastrointestinal illness syndrome</p>	Not applicable
Severe Illness or Death potentially due to infectious disease	<p>ACUTE onset of shock or coma from potentially infectious causes</p> <p>EXCLUDES shock from trauma</p> <p>INCLUDES SUDDEN death, death in emergency room, intrauterine deaths, fetal death, spontaneous abortion, and still births</p> <p>EXCLUDES induced fetal abortions, deaths of unknown cause, and unattended deaths</p>	Not applicable

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CENTERS FOR DISEASE CONTROL AND PREVENTION**

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